Attitudes and environmental use and management in the forgotten seventy per cent of Australia

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INTRODUCTION

A quick (but far from trivial) quiz: what is the significance to the Australian environment of the following organisms: *Prosopis juliflora* and *Acacia nilotica?* If you don't know, then you have very little idea of the magnitude of the environmental problems facing 70% of Australia. No, they do not affect rainforests, wetlands, mangroves or the other things dear to conservationists' hearts. They are only problems in the semi-arid and arid zones, the forgotten centre of this continent. Both are introduced shrubs, both are spreading, both have the potential to totally alter the nature of the environment, both will cause economic ruin for graziers, both have been essentially ignored by the governments of Australia.

The theme that I want to consider in this essay is attitudes to environmental use and management in semi-arid Australia. Commenting on the views expressed by Harry Recher (1990) is a bit like being asked to review my own philosophy. I agree generally with everything that he says. Where I disagree it is over detail, emphasis or priority. However, as an overview it is outstanding and I want to use it as a starting point to expound some thoughts on the neglected 70%.

Most of my career has been spent in arid and semi-arid zones and the examples I use here are primarily drawn from the arid zone of Australia. Why? For no other reason that 70% of the land area of this continent is arid and it attracts a disproportionatley low level of attention. This is not because there are no problems, it is because of ignorance in the predominantly coastal community.

Environment: Ecology, Economics and People; or Egos and Empires?

There are several models of environmental use: perhaps the simplest is the environmental triangle:

Ecology
Economics People

The three elements are interconnected and all must be incorporated into any workable solution to environmental problems. Omit any one element, the triangle collapses and there is no effective solution. Unfortunately, most protagonists on both sides in the conserve/develop debate ignore one element:

Conservationists	Ecology+People
Developers	Economics+People

I sometimes wonder if both believe that the same people are in their respective groups!

There is an alternative view of the environment, and this is as a decision-making issue. Although Harry Recher and I have had similar career paths (to the extent of applying for the same job!), I have benefitted from spending four years in the Western Lands Commission, initially as Rangelands Director and then as Assistant Commissioner (Land Resources). During this time I worked at the senior administrative level developing policies on land use and management in semi-arid western New South Wales. I am not too sure of how much I actually shaped, but I certainly learnt first-hand how high-level decisions are made. I saw the lobbying process, I saw Ministerial intervention, I saw inter-agency rivalry, and I saw client capture of regulatory agencies.

In my bleaker moments, I refer to this as the "egos and empires model". Decisions are made not for the purported or even supposed benefit of any client, and rarely for the future benefit of the environment, but rather to protect the position of the chief executive officers (CEOs) of agencies. Questions of long-term vision, environmental quality and morality seem to be totally neglected in favour of dubious short-term gains. Interestingly, I saw no evidence of any direct or indirect personal gain. Rather, the objective seemed to be to score points off agencies with opposing views. This behaviour was certainly not limited to development agencies, it also occurred in conservation agencies. Perhaps it is a universal personality trait of those who seek and attain high office. In any event, good long-term decisions seem to be made in spite of, rather than because of, many CEOs.

Land Use versus Land Management, Conservation verses Development

In 1987 and 1988, I organized and ran two tours of the Western Division of New South Wales for senior members of the major conservation groups in New South Wales. The objective was to educate them about the scale, operations, management, problems etc., of the 32 Mha of semi-arid country in the state. The bulk of the costs were met by the Western Lands Commission. The tours were highly succcessful, and all of the conservation participants benefitted from the tours. The Commission also benefitted because there were fewer hostile letters about policies, and better understanding of the problems facing pastoralists in the Division.

In my summary report to the Minister for Natural Resources after the second tour I described the lesson that I had learnt: conservationists and pastoralists generally do not have dialogues, they have *duologues,* two people talking to each other ostensibly on the same subject, but actually about different things. Specifically, conservationists have a fixed view about the correct and moral *use* of land. They are concerned with *allocation* of land use. Thus they are concerned with abstract concepts of conservation versus utilization. On the other hand, pastoralists have progressed beyond this point, they are using the land for enterprises that they believe are satisfactory. They are only concerned with *managing* the land. They are concerned with concrete issues of day to day and year to year decisions.

Cultivation in the Western Division provides a good example. Conservationists believe that cultivating light soils in the Division is morally, environmentally and probably economically unjustifiable. They are impressed with the new management techniques, but the land use is wrong. Lessees (and most government agencies) are only concerned with the techniques that can be used to maximize productivity and minimize damage (in a very narrow sense).

As the conservation movement has a long history of fighting land *use* rather than *management* issues, I see little hope for real understanding on either side. Any debate will be superficial and probably a waste of time. For these reasons, I believe that little of real and lasting value will develop from the joint working party of the Australian Conservation Foundation and the National Farmers' Federation.

A similar communication problem has emerged over the word "conservation" which has now been adopted by the rural community in the form of "we are the true conservationists, not the city-based greenies". This illustrates a major polarization of attitude towards conservation. If we examine the basic motive behind the conservation then the differences are obvious. The motive for nature conservation as espoused by the conservation movement and practised by agencies such as the National Parks and Wildlife Service is to retain samples of ecosystems and species for their own intrinsic merits. Management of the estate may range from total lock-out (wilderness management) to intensive with roads, buildings, facilities, vermin control, fire control, numerous visitors, etc. In farming and grazing enterprises, the motive for conservation is almost (but not always) invariably financial. Management may range from excessive (over-cultivating or over-grazing) to conservative (minimum tillage systems or low stocking rates). In the new-speak of the rural community, the latter is what makes them the "true conservationists". However, when it comes to a choice, they are generally reticent on the question of priorities: nature conservation values versus perceived profits.

Global and abstract definitions of conservation do not really help. IUCN (1980) defines "conservation" in the World Conservation Strategy as "the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs of future generations". Least this be taken to mean lock it up and throw away the key, the next sentence in the definition is crucial: "Thus conservation is positive, embracing preservation, maintenance, sustainable utilization, restoration, and the enhancement of the natural environment". Truly a case of all things to all people.

Sustainability, the New Religion and the Semi-arid Zone of Australia

In most contexts these days, the word "sustainability" acts like an emetic on me. It is bandied around by politicians of all hues and abilities, developers, conservationists etc. What does it mean? The standard definition (obviously derived from IUCN) of "sustainable development" is the abstraction provided by the World Commission on Environment and Development (1987, p. 43): "... development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This abstraction is more an act of faith than a workable definition and I am very wary of new religions and new messiahs. The very fact that everyone can apparently embrace the definition makes it suspect. I will not attempt an alternate global definition but for semi-arid Australia Christie (1984, p. 159) in describing the central issue of grazing management has provided an excellent first approximation: "... how best to relate livestock numbers to the conditions of fluctuating herbage supply and still maintain stability of the soil and vegetation resources and cash flow!"

This is, of course, based on pastoral production and does not refer directly to conservation. But it does include one key component masked by the green-tinted glasses on many naive conservationists: money. As most of the semi-arid zone is used for grazing, the financial well-being of the pastoralists is an essential prerequisite for off-reserve conservation.

However, economic conditions are not rosy for wool growers. As I write this essay (May 1990), the Australian wool industry is in serious trouble. The world market for wool has slumped and the Australian Wool Corporation is purchasing up to 80% of wool offered at auctions. This is financed by a levy on all wool growers, and by overseas loans. Various strategies are being offered by bureaucrats, economists, wool growers and politicians to reduce the enormous stockpile of over 2.5 million bales of wool owned by the Corporation. Clearly we should question the economic sustainability of an industry which purchases its own product.

One solution often suggested by conservationists is to simply remove all the sheep (especially from the semi-arid and arid zones) and turn it into national park. A specific variant of this, removing sheep and harvesting kangaroos instead was extensively debated at a conference of the Royal Zoological Society of New South Wales in 1988 (Lunney and Grigg 1988). I do not intend to consider this further here other than to point out three flaws. The first is purely economic: kangaroo meat is not a direct substitute for wool fibre, thus the products are not interchangeable.

The second flaw is the myth that the land is vacant and waiting to be used. Most semi-arid land in Australia is Crown land owned by the various state governments and leased to pastoralists (Young 1979). The land is not sitting idle waiting for a suitable use. Most is under perpetual or long-term lease for the sole use and enjoyment of the lessee. It cannot be simply reallocated to conservation by administrative (or probably legislative) fiat. If the land is to be reallocated, it must be either resumed (politically unlikely) or purchased by the conservation agency from the lessee on the open market.

The third flaw is that the general solution ignores the many people involved. This is a recurrent theme in conservationist thinking.

Ignorance, Self-delusion or Cupidity?

Land degradation is the major environmental problem facing the nation in this decade. According to Ryan and Robinson (1990) "farmers . . . have long known the value of combating land degradation because they are the ones who pay through reduced production of land values". However, there is evidence to suggest that this knowledge is distorted by proximity to home. In the Darling Downs of Queensland, 88% of farmers perceived soil erosion to be a major regional problem, 47% perceived major erosion on nearby farms, but only 11% perceived erosion to be a major problem on their own farms (Rickson *et al.* 1987). Curiously, while they underestimate the extent of erosion on their own land, farmers overestimate the long-term decrease of crop yield caused by soil loss.

How many pastoralists in semi-arid Queensland know the impact of soil loss on production of grasses? Pressland *et al.* (1988) show that removing the top 5 cm of mulga soils reduces the above ground production of Buffel Grass by over 90%. Are pastoralists aware of the magnitude of the reduction and its implications for their enterprise? Bare ground has been accepted as normal in semi-arid country for decades, so perhaps pastoralists have no idea of these changes and their effects.

Many farmers underestimate the risk of degradation in their properties. There is considerable publicity given to dramatic erosion in the media and in conservation and agricultural literature. In marked contrast there is very little publicity of the early signs of degradation (Vanclay 1989). Thus many farmers do not recognize the danger signs until it is too late. This may help explain the findings of Rickson *et al.* described above.

Such problems extend beyond farmers and pastoralists to agency personnel. In 1987, a group from the United States Department of Agriculture Soil Conservation Service (USDA-SCS) visited New South Wales on a study tour. In their final report (Newman *et al.* 1987) they comment on the approaches and programmes of the New South Wales Soil Conservation Service in western New South Wales. While very complimentary of the overall programmes, they reported ". . . there was one tendency which appeared in some way at almost every location that surprised and worried us. This was the tendency for accepting situations as being unchangeable, saying that the *status quo* was good enough, or giving in and fully accepting the local attitude of the area graziers." The report provides examples of these attitudes which include:

> "In regards to what we [the USDA-SCS team] felt was serious active soil erosion and degradation — 'It's not a problem anymore, because it isn't as bad as it used to be.'
>
> 'If it rains everything will be O.K.' ".

I have experienced this myself when an officer of an agency told me that there was no salinity problem in the Murray Geological Basin because the water level in a well on Farmer Jones' property had not risen and the water was not saline. The officer (a graduate with a science degree) completely rejected all the research carried out by several agencies and many scientists. He argued that the policy (to prevent further clearing in the Basin) was unnecessary and would reduce Farmer Jones' finances.

Such attitudes are clear evidence of "client capture", a well-known phenomenon in regulatory and extension agencies. I use these examples solely to demonstrate that problems of beliefs and attitudes extend well beyond the pastoralists. There is, in fact, a wider issue of whether the accepted wisdom as espoused by pastoralist and agency is acceptable at all (Pickard in press). In many instances it is unacceptable (see e.g., Purvis 1986 for a vivid description of problems encountered when challenging accepted attitudes to stocking levels in Central Australia).

Quo Vadis?

As many political oppositions have found, it is easy to criticize, but it is difficult to achieve when you are finally in a position to do so. Now that I have criticized, what solutions can I offer? Few solutions, but a number of suggestions and questions. I will start with an observation: the rural industry is feeling more than a little victimized by city-based conservationists, and with good reason. Most rural producers have been applying accepted wisdom and advice from extension agencies for many years. Some at least of this wisdom is incorrect. However, we accuse others of being tardy in changing, we should remember glass houses and stones. How many of us still drive cars polluting the atmosphere, use the old spray cans (with CFCs) that we have lying around at home, light campfires and contribute to the Greenhouse Effect? Our individual contribution is negligible, but then so are those of each of the other hundreds of millions of people on this planet. Why should *they* bear all the blame?

Change is a feature of farming and grazing. In the last few years, graziers themselves have clearly demonstrated the financial value of lower stocking rate grazing systems in the semi-arid zone (Purvis 1986; Morrisey and O'Connor 1988). Before the armchair strategists descend into an orgy of self-congratulation chorusing "we told you so", they should remember that they had no information anyway. Further, graziers only acknowledge information from their peers or proven sources, and this certainly excludes conservationists!

So, where do we go from here?

Grazing will remain the predominant use of our semi-arid environments for the forseeable future. Thus the spectrum of total development to wilderness must be incorporated into this scenario. Wilderness is incompatible with any form of environmental management for livestock and profit. However, the same is not necessarily true of off-reserve conservation. Pressey and Nicholls (1989) show that a system to reserve just one sample of every land system in western New South Wales is politically unattainable. As Recher (1990) says we must come to terms with multiple use, and such a model is already well-advanced in arid South Australia.

Where does this leave the other component of the environmental triangle: people? I may be naive, but I believe that many pastoralists would be prepared to co-operate with conservation if they could be convinced of the benefits to humanity and if they do not carry the full costs. It is unreasonable to expect Grazier Smith to bear the full brunt of a conservation programme of general benefit to society. Compensation is essential for acceptance of such programmes.

An alternative attitude of compensation, apparently typical of much conservationist thinking is found in the as yet unpublished recommendations of the plenary session of the National Conference on the "Conservation of Threatened Species and their Habitats" held in Sydney in March 1987. Recommendation 5.1 (viii) gives "... the Director [of the agency administering the proposed legislation] a full range of powers in relation to ecosystem management for endangered species; this should include the suspension of existing use rights, with a discretion to render financial assistance in exceptional circumstances". Given such unrealistic views, I think that the conserve/develop debate will continue and probably become a growth industry!

I will conclude this essay with some observations on what I believe to be the greatest single problem of attitude determining environmental use and management in the semi-arid zone. This is the perception that landholders of both freehold and leasehold land have inalienable rights to use the lands as they see fit. Some of these "rights" are codified in legislation, but in general they are only assumed but are defended vociferously. Unless and until this attitude is changed, and we introduce the notion of responsibility and accountability for actions, then good (however we chose to define this) environmental use and management is unattainable.

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Wildlife conservation in Australia: an inland view

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The interior of Australia is a land of soil deficiencies. If it isn't lack of nutrients that dominates biological activity in a particular inland environment, then it's lack of soil moisture. Either way, the arid and semi-arid regions of our continent are characterized by low and irregular primary productivity, and it is in agreeing with that fundamental point made by Recher (1990) that I wish to begin my response to his important article.

Most conservation problems in inland Australia stem from the fact that people of European origin have either been ignorant of the edaphic limitations to productivity or have wilfully ignored them. In the arid zone, virtually no vegetation has been cleared, but even so the record of mammalian extinctions is the worst of any climatic zone on the continent (Burbidge and McKenzie 1989). Discussion abounds on precise causes, but the ultimate reason for this sorry record is almost certainly the poverty of primary production (Morton 1990). These extinctions came about because many medium-sized species were dependent upon scattered patches of fertile and productive country which were invaded by stock and rabbits brought by the Europeans; during the inevitable dry times, populations of the native species were extinguished under this pressure and the added impact of introduced predators (Morton 1990). Contractions in range among mammals continue. The situation with birds is unclear but is a matter of great concern, and invertebrate faunas have almost certainly undergone major changes.

What can we do about all this? One thing seems certain to me, and it reiterates another vital point made by Recher (1990): that we will halt the decline only through intelligent land management on a national scale. Piecemeal and kneejerk reactions to perceived crises will continue to divert our attention away from the long, hard grind that is necessary for the conversion of our approach to Australia's lands and resources from that of cavalier disregard to one of sustainability.

It was with this attitude in mind that staff from the National Rangelands Programme within CSIRO's Division of Wildlife and Ecology recently published "A policy for the future of Australia's rangelands" (Foran *et al.* 1990). The policy did not consider state boundaries and was therefore national in approach, as three-quarters of Australia can be considered to be rangeland (i.e., country that is not suitable for agriculture and is used principally for grazing). The document argues that the economics of grazing must be integrated with conservation and other uses. It starts with the problem of highly variable production, points out that the future of the biota of this vast region depends utterly on a sustainable approach to grazing, and shows that this approach is also necessary for the long-term survival of the pastoral industry itself. It emphasizes other critical issues identified by Recher (1990): that degradation of soils is a massive and crucial problem; that conservation by reservation alone will be insufficient; and that principles of wildlife management must be extended to all lands. The